The Uranium Processing Facility

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Uranium Processing Facility Project

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The Nation's EU Processing Facility

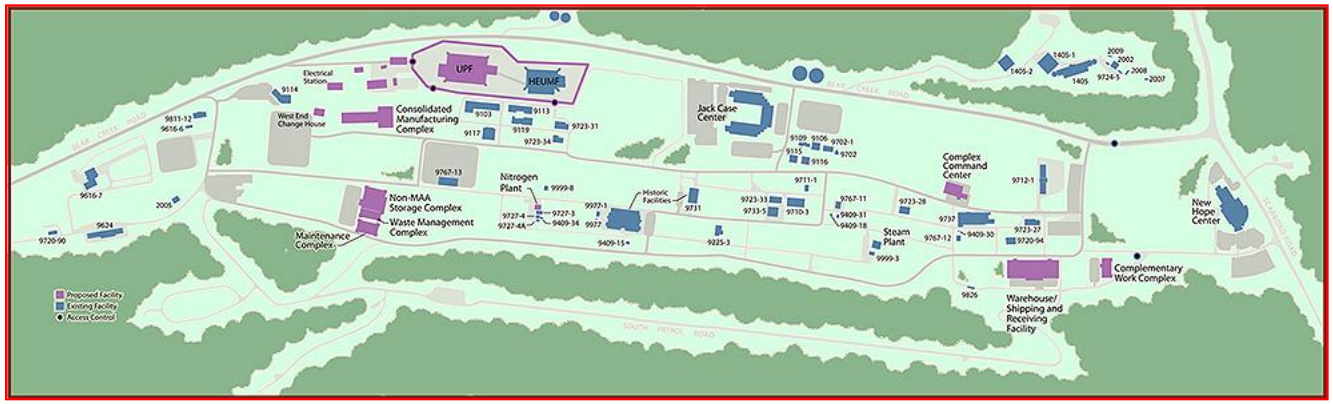
Mission:

Ensuring the Nation's enriched uranium processing is secure, safe, and efficient.

UPF—Key to Y-12 Transformation

Today

Future

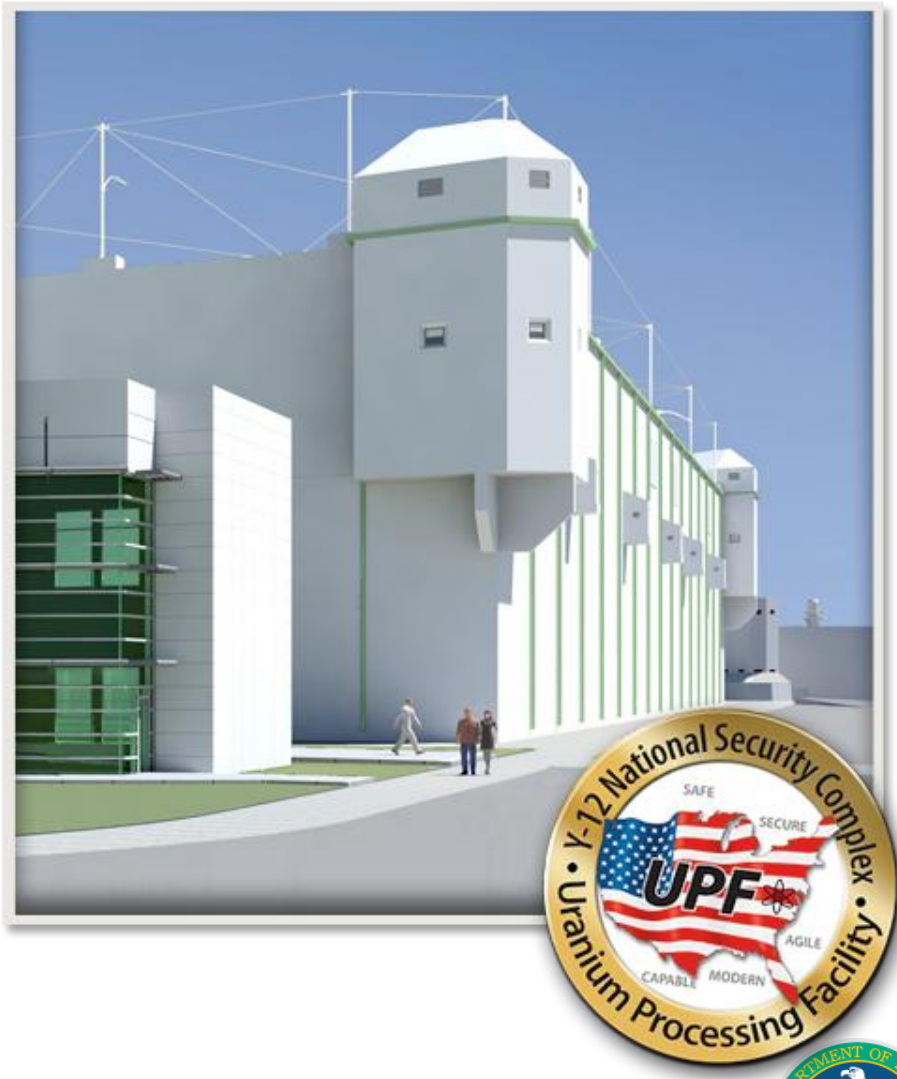


UPF Drivers

- 9212 is past end-of-life
- Existing EU facilities don't meet modern nuclear safety or security standards
- Existing EU facilities are experiencing age-related degradation, costing more to maintain and increasing safety risk
- Facility consolidation provides savings—significant security improvements and operational efficiencies
- UPF replaces all EU operations at Y-12 in 35% of current space

The Case for UPF

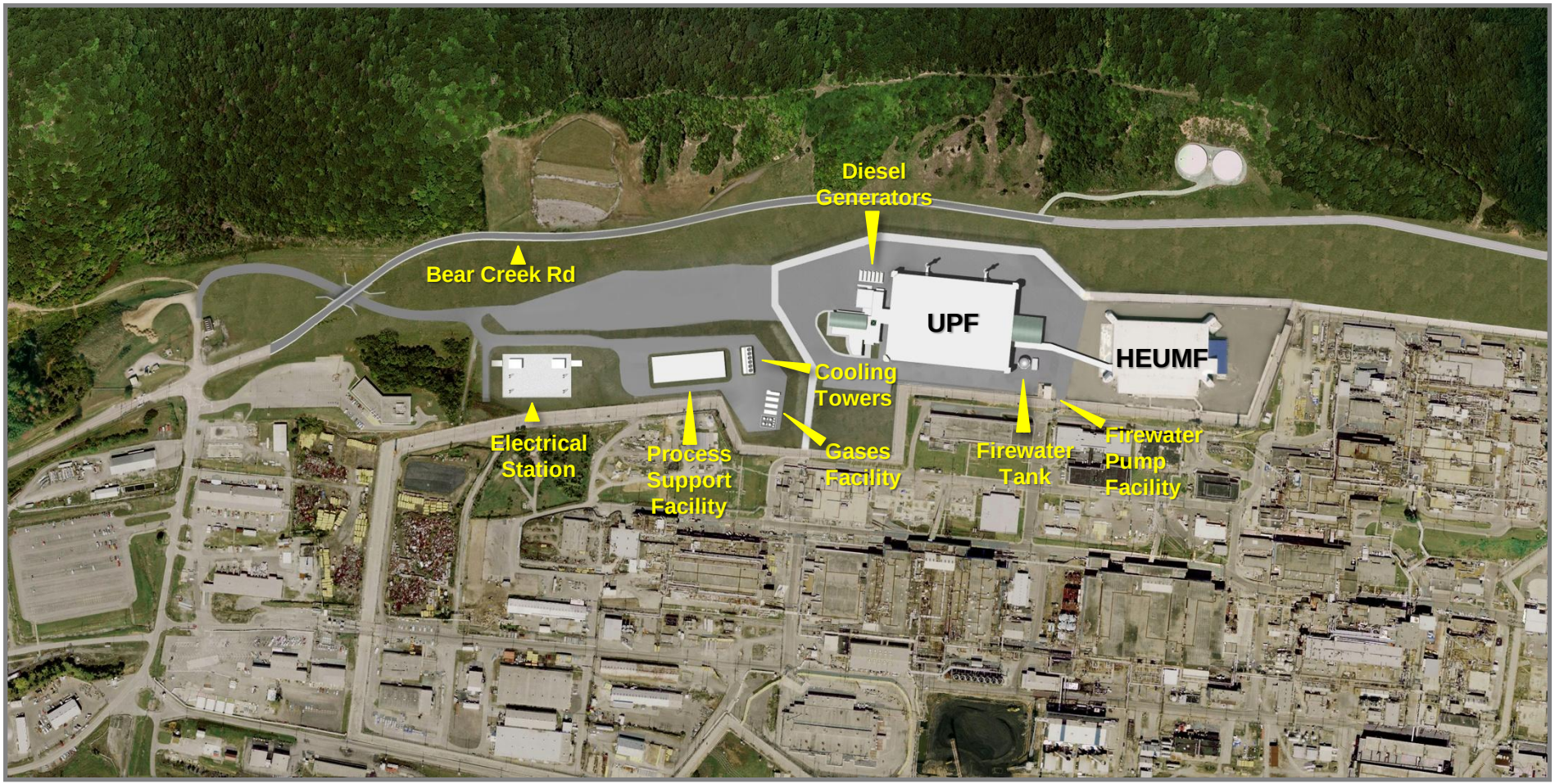
- More efficient, saving $200 million per year in operating costs
- More secure, reducing Y-12's security footprint by 90 %
- More safe and reliable
  - Consolidating enriched uranium operations
  - Replacing 60-year-old facilities
  - Reducing workers' radiation exposures 90%



Improvements Over Current Operations

Essential Elements	Current Operations	UPF Operations
Occupied Space	900,000 ft^2	<180,000 ft^2
PIDAS Linear Footage	13,330	5,230
Acres of Protected Area	150	15
Security Controls	Mixed, administrative	GSP compliance, engineered
Material Access Areas	4	1
Active Safety Class Systems	4	0
Radiation Work Permits	145 (average)	Only required for non-routine operations
Fire Protection Code Deviations	679	0
Worker Safety/Exposure	Respirators required for routine operations	Respirators not required for routine work

UPF Site Plan



UPF Quick Facts

Main Building: ~350,000 ft^2

Almost as big as 4 home improvement stores

Conduit: ~400,000 linear feet

Enough conduit to wrap around the University of Tennessee's Neyland Stadium 133 times

Excavation: ~400,000 cubic yards

Enough dirt to fill 23,500 dump trucks stretching 125 miles from Knoxville to Asheville, NC

Wiring & Cable: ~2,000,000 linear feet

Enough wiring to stretch from Knoxville to Charleston, SC

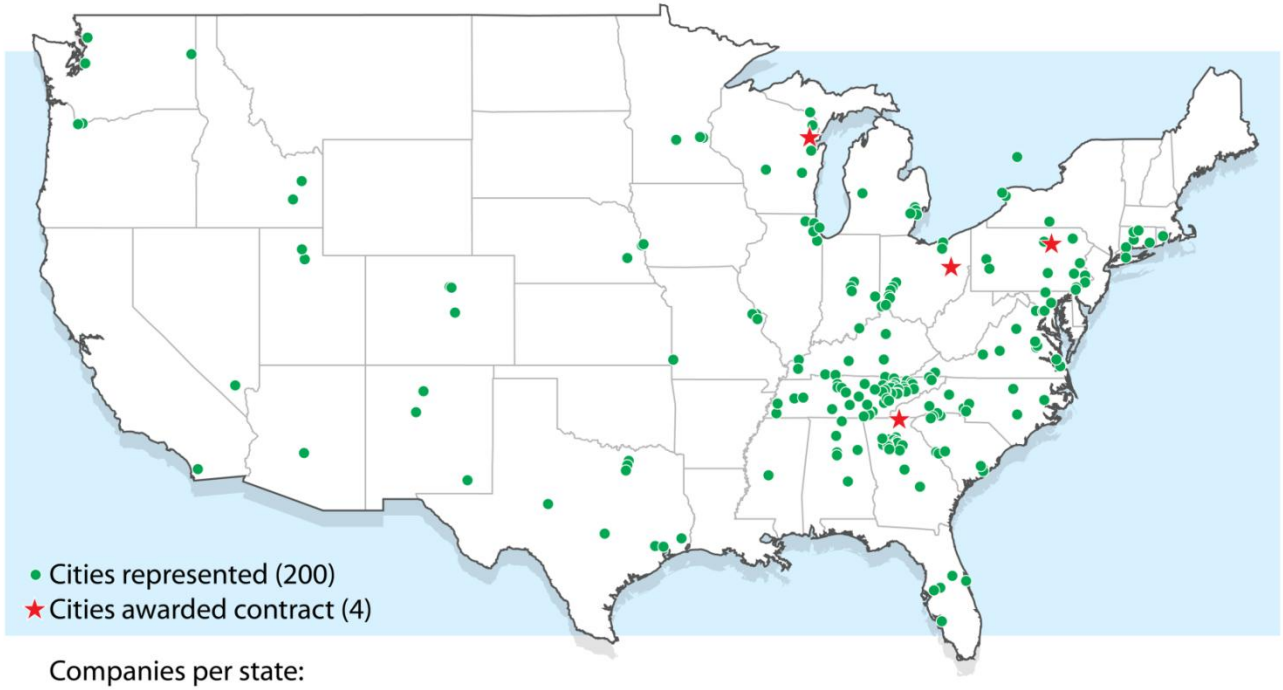
Concrete: ~150,000 cubic yards

Enough to fill a football field, including the end zones, 70 feet deep

Gloveboxes: ~2,000 feet

Enough to stretch from New Hope Center to the entrance to Commerce Park on Scarboro Road

Economic Impact



Companies per state:

Alabama 8	Idaho 2	Nebraska 3	Tennessee 345
Arizona 1	Illinois 6	New Jersey 1	Texas 10
California 1	Indiana 4	New Mexico 4	Utah 3
Colorado 5	Kentucky 10	Nevada 1	Virginia 11
Connecticut 5	Maryland 2	New York 4	Washington 3
D.C., Washington ... 1	Michigan 7	Ohio 12	Wisconsin 6
Delaware 2	Minnesota 3	Oregon 2	
Florida 6	Missouri 5	Pennsylvania 10	Canada 2
Georgia 34	Mississippi 1	Rhode Island 1	
Iowa 1	North Carolina 18	South Carolina 14	**TOTAL 554**

Cost Range and Key Performance Dates

- NNSA Cost Range Estimate (October 2010) $4.2B - $6.5B

- Key UPF Project Dates

– Site Readiness Scope Complete	2014
– Site Preparation Scope Complete	2014
– Building Construction Begins	2014
– UPF Construction Complete	2020
– Initial Functionality	2021
– Full Capability	2024

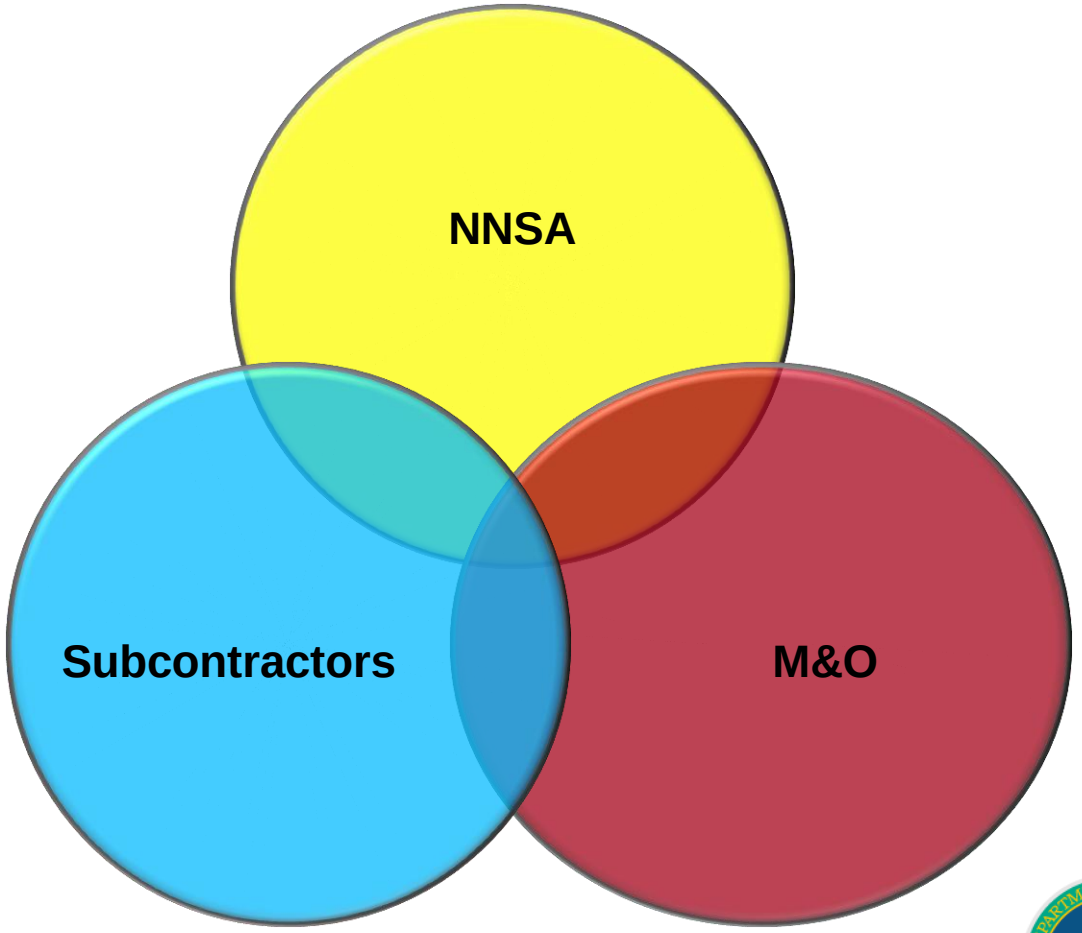
Turnkey Approach to an Integrated Project

Integrated Project Team

NNSA
- Mission Needs & Direction
- Oversight
- Funding

M&O
- Project Execution
- Baseline Management
- Overall EPC Functions through Readiness

Subcontracts
- Engineering Support
- Construction Subcontracts



Design by the Numbers

Drawings	6,028
Calculations	3,230
Piping and instrumentation diagrams	1,267
Datasheets	1,138
Specifications	744
Lists	596
Miscellaneous documents	243
Process flow diagrams	143
Single lines	71
System design descriptions	66
Interface control tabulations	61

UPF Design Completion Status

- Overall design – 66% complete
- Design of site readiness for Bear Creek Road and selected utilities (CD-2/3A)—100% complete
- Updated site preparation and long-lead procurement (CD-2/3B) package—99% complete

In Summary…

"Without an ability to produce uranium components, any plan to sustain the stockpile, as well as support for our Navy nuclear propulsion, will come to a halt. This would have a significant impact, not just on the weapons program, but in dealing with nuclear dangers of many kinds."

— Nuclear Posture Review 2010